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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,097	02/21/2006	Leung Choi Chow	2733.35WOUS	4192

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PATTERSON THUENTE CHRISTENSEN PEDERSEN, P.A.  
4800 IDS CENTER  
80 SOUTH 8TH STREET  
MINNEAPOLIS, MN 55402-2100

EXAMINER
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MICHENER, JOSHUA J

ART UNIT	PAPER NUMBER
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3644

MAIL DATE	DELIVERY MODE
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08/23/2010

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/552,097

**Applicant(s)**

CHOW ET AL.

**Examiner**

JOSHUA J. MICHENER

**Art Unit**

3644

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 June 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 15-29 and 31-35 is/are pending in the application.
- 4a) Of the above claim(s) 19, 21, 22, 24, 31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-18, 20, 23, 27-29, 33-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 15 – 18, 20, 23, 27 - 29, 33, 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hartel (US 3,133,717) in view of Roth (US 1,743,074).**

1. Regarding claims 15, 16, 17, 18, 23, 28, 29, 35 Hartel discloses an aircraft comprising movable landing gear between and stowed and retracted position (figures 1-3) wherein the landing gear comprises a wheel having a tire and a rim (figures 1 – 3) where a junction exists between the tire and rim forming a gap (figures 1 – 3).

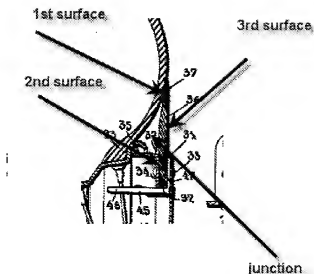
Hartel fails to teach of a separate part that is provided between the junction to close the gap wherein a first surface abuts the tire, a second surface in contact with the rim and a third surface that extends across the junction; wherein on at least one side of the wheel during use of the aircraft when airborne and the landing gear is in a position ready for landing of the aircraft, the surface of the wheel/tire assembly presented to the airflow within the part bounded by the widest part of the tire is "substantially" flat in shape.

Roth discloses it is known to have a separate part on both sides of the wheel with a first surface abutting the tire (see figure below), the second surface in contact with the rim (17,23,35,32,34) and third surface extends between the first and second surface (see figure below) so as to provide a surface to smooth and close the gap

(see fig below) wherein the separate part is flexible and made of rubber (col 2, line 21) thus deformable and capable to be moved manually; wherein the surface of the wheel/tire assembly presented to the airflow within the part bounded by the widest part of the tire is "substantially" flat in shape (fig below).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Hartel to comprise of a separate part that closes the gap between the junction on both sides of the wheel between the tire and rim and be substantially smooth section of the widest part as disclosed by Roth in order to reduce air resistance by streamlining the flow as taught by Roth (lines 5 – 11).

It should be appreciated that the applicant's functional language in the claims does not serve to impart patentability. While features of an apparatus may be recited either structurally or functional, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Apparatus claims cover what a device is, not what a device does. A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior apparatus teaches all the structural limitation of the claims.



Regarding claim 20, Hartel, as modified, discloses the apparatus as in claim 15 wherein at least a portion (the separate part is made of rubber) is so configured that once the force between the wheels and the ground exceeds a first given threshold force, it moves out of a gap that said separate part bridges when the aircraft is airborne, and once the force between the wheels and the ground drops to or below a second given threshold force, it moves back to the position in which it bridges the gap.

Regarding claim 27, Hartel, as modified, discloses the apparatus as in claim 15, wherein the landing gear are suitable for jet engine aircraft with undercarriage cargo bay storage, but is silent to type/size suitable for 50 or more passengers. However, the Examiner takes official notice, it is old and well known in the art that commercial airliners are comprised of retractable landing gear with undercarriage bay storage wherein some jet engine airliners carry 50 or more passengers. Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to

implement this landing gear system of Hartel, as modified into an airliner that carries 50 or more passengers because it is old and well known to utilize retractable landing gear on commercial airlines to reduce air drag during takeoff and landing.

Regarding claim 33, Hartel, as modified, discloses the apparatus as in claim 15 wherein the first surface follows the shape of the tire (see figure above).

Regarding claim 34, Hartel, as modified, discloses the apparatus as in claim 15 wherein the first surface follows the shape of the rim (see figure above).

**Claims 15 – 18, 20, 23, 27 - 29, 33, 34, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Labrecque (US 3.430.896) in view of Roth (US 1,743,074).**

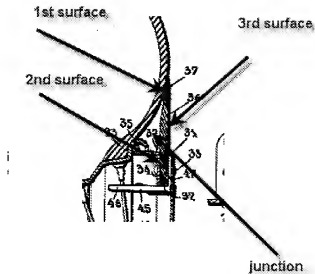
2. Regarding claims 15, 16, 17, 18, 23, 28, 29, 35 Labrezque discloses an aircraft comprising movable landing gear between and stowed and retracted position (figures 1-4) wherein the landing gear comprises a wheel having a tire and a rim (figures 1 –4) where a junction exists between the tire and rim forming a gap (figures 1 –4).

Labrezque fails to teach of a separate part that is provided between the junction to close the gap wherein a first surface abuts the tire, a second surface in contact with the wheel (rim) and a third surface that extends across the junction; wherein on at least one side of the wheel during use of the aircraft when airborne and the landing gear is in a position ready for landing of the aircraft, the surface of the wheel/tire assembly presented to the airflow within the part bounded by the widest part of the tire is substantially flat.

Roth discloses it is known to have a separate part on both sides of the wheel with a first surface abuts the tire (see figure below), the second surface in contact with the rim (17,23,35,32,34) and third surface extends between the first and second surface (see figure below) so as to provide a surface to smooth and close the gap (see fig below) wherein the separate part is flexible and made of rubber (col 2, line 21) thus deformable and capable to be moved manually; wherein the surface of the wheel/tire assembly presented to the airflow within the part bounded by the widest part of the tire is "substantially" (fig below).

It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Labrezque to comprise of a separate part that closes the gap between the junction on both sides of the wheel between the tire and rim and be substantially smooth section of the widest part as disclosed by Roth in order to reduce air resistance by streamlining the flow as taught by Roth (lines 5 – 11).

It should be appreciated that the applicant's functional language in the claims does not serve to impart patentability. While features of an apparatus may be recited either structurally or functional, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. Apparatus claims cover what a device is, not what a device does. A claim containing a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus if the prior apparatus teaches all the structural limitation of the claims.



Regarding claim 20, Labrezque, as modified, discloses the apparatus as in claim 15 wherein at least a portion (the separate part is made of rubber) is so configured that once the force between the wheels and the ground exceeds a first given threshold force, it moves out of a gap that said separate part bridges when the aircraft is airborne, and once the force between the wheels and the ground drops to or below a second given threshold force, it moves back to the position in which it bridges the gap.

Regarding claim 27, Labrezque, as modified, discloses the apparatus as in claim 15, wherein the landing gear are suitable for jet engine aircraft with undercarriage cargo bay storage, but is silent to type/size suitable for 50 or more passengers. However, the Examiner takes official notice, it is old and well known in the art that commercial airliners are comprised of retractable landing gear with undercarriage bay storage wherein some jet engine airliners carry 50 or more passengers. Thus, it would have been obvious for one of ordinary skill in the art at the time the invention was made to



implement this landing gear system of Labrezque, as modified into an airliner that carries 50 or more passengers because it is old and well known to utilize retractable landing gear on commercial airlines to reduce air drag during takeoff and landing.

Regarding claim 33, Labrezque, as modified, discloses the apparatus as in claim 15 wherein the first surface follows the shape of the tire (see figure above).

Regarding claim 34, Labrezque, as modified, discloses the apparatus as in claim 15 wherein the first surface follows the shape of the rim (see figure above).

### ***Response to Arguments***

In response to applicant's argument that Roth could not be combined with either Labrezque or Hartel, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the separate part fills the gap) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

In response to Applicant's arguments that Roth fails to show a "substantially" flat portion at the widest part of the wheel/tire assembly, the Examiner respectfully disagrees. As the "wheel/tire" clause is written as an alternative because the "forward slash" in English text can be treated as an "OR" clause, wherein the tire assembly at the widest part would be the widest part of the tire where the separate part interfaces thus meeting the scope of the claim.

In response to applicant's argument that there is no specific suggestion, teaching, or motivation in references to combine prior art, it is noted, in light of the recent Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*, (550 U.S.-, 82 USPQ2d 1385 (2007)), *KSR* forecloses the argument that a **specific** teaching, suggestion, or motivation is required to support a finding of obviousness. (see also the recent Board decision *Ex parte Smith*, - USPQ2d- -, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007) (citing *KSR*, USPQ2d at 1396) (available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf>).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHUA J. MICHENER whose telephone number is (571)272-1467. The examiner can normally be reached on Monday - Friday 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Collins can be reached on 571-272-6886. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JOSHUA J MICHENER

Application/Control Number: 10/552,097  
Art Unit: 3644

Page 11

Examiner  
Art Unit 3644

/JOSHUA J MICHENER/  
Examiner, Art Unit 3644